

Straight-line and turning locomotion of *Paramecia*

Saikat Jana¹, Matthew Giarra², Pavlos Vlachos² and Sunghwan Jung¹

¹Department of Engineering Science and Mechanics

²Department of Mechanical Engineering,
Virginia Tech, Blacksburg, VA 24061, USA

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Abstract

In this fluid dynamics video we investigate the flow field around straight-line swimming and right and left turning *Paramecia* using micro- particle image velocimetry (μ PIV). A *Paramecium* controls its ciliary beating to produce different fluid velocities on either side of its body. This phenomenon is visualized by applying μ PIV to images in which *Paramecia* swim in a dilute suspension of 1 μ m polystyrene spheres. *Paramecia* that swim straight exhibit similar magnitudes of velocity on either side of their bodies. In contrast, right-turning *Paramecia* exhibit greater magnitudes of velocity on their right sides, while left-turning organisms show the opposite.